WHAT IS CLAIMED IS:

1. A controller that corrects erroneous data bytes that are stored in a sector on a disk, wherein:

the controller performs a first attempt to correct erroneous data bytes that are stored in a failed sector on the disk by decoding first level CRC and ECC bytes,

if the first attempt to correct the erroneous data bytes is unsuccessful, the controller adds a long block membership (LBM) byte to the first level CRC and ECC bytes, the LBM byte indicating whether the failed sector is part of a long block that includes a plurality of sectors,

the controller performs a second attempt to correct the erroneous data bytes by decoding second level ECC bytes, and

if the second attempt to correct the data bytes is unsuccessful, the controller adds the LBM byte to the first level CRC and ECC bytes again and performs a third attempt to correct the erroneous data bytes by decoding the second level ECC bytes to generate corrected data bytes.

2. The controller according to claim 1 wherein the controller determines whether an error pattern in the data bytes and the second level ECC bytes overlap by more than a threshold value.

3. The controller according to claim 2 wherein the controller accepts the corrected data bytes, if the error pattern and the data bytes overlap by more than the threshold value and the third attempt to correct the erroneous data bytes is successful.

4. The controller according to claim 3 wherein the controller declares a hard error if the third attempt to correct the erroneous data bytes is not successful.

5. The controller according to claim 3 wherein the controller declares a miscorrection if the error pattern and the erroneous data bytes overlap by less than the threshold value.

6. The controller according to claim 1 wherein the controller generates syndromes for the second level ECC bytes.

7. The controller according to claim 6 wherein the controller decodes the second level ECC bytes during the second attempt to correct the erroneous data bytes.

8. The controller according to claim 1 wherein the controller declares a miscorrection if the controller successfully corrects the erroneous data bytes during the second attempt.

9. The controller according to claim 1 wherein the controller includes a read/write transducer interface that transmits data signals to a disk assembly.

10. The controller according to claim 1 wherein the controller communicates with a host system.

11. A disk drive system comprising:

a controller that performs a first attempt to correct erroneous data bytes that are stored in a failed sector on a disk by decoding first level CRC and ECC bytes, performs a second attempt to correct the erroneous data bytes by decoding second level ECC bytes if the first attempt is unsuccessful, and performs a third attempt to correct the erroneous data bytes by decoding the second level ECC bytes if the second attempt is unsuccessful,

wherein the controller adds a long block membership (LBM) byte to the first level CRC and ECC bytes if the first attempt is unsuccessful, and the controller adds the LBM byte to the first level CRC and ECC bytes again if the second attempt is unsuccessful,

the LBM byte indicating whether the failed sector is part of a long block that includes a plurality of sectors.

12. The disk drive system according to claim 11 wherein the controller determines whether an error pattern in the data bytes and the second level ECC bytes overlap by more than a threshold value.

13. The disk drive system according to claim 12 wherein the controller accepts the corrected data bytes, if the error pattern and the data bytes overlap by more than the threshold value and the third attempt to correct the erroneous data bytes is successful.

14. The disk drive system according to claim 13 wherein the controller declares a hard error if the third attempt to correct the erroneous data bytes is not successful.

15. The disk drive system according to claim 13 wherein the controller declares a miscorrection if the error pattern and the data bytes overlap by less than the threshold value.

16. The disk drive system according to claim 11 wherein the controller generates syndromes for the second level ECC bytes.

17. The disk drive system according to claim 16 wherein the controller decodes the second level ECC bytes during the second attempt to correct the erroneous data bytes.

18. The disk drive system according to claim 11 wherein the controller declares a miscorrection if the controller successfully corrects the erroneous data bytes during the second attempt.

19. The disk drive system according to claim 11 wherein the controller includes a ECC read processor.

20. The disk drive system according to claim 11 wherein the controller includes a formatter.